Heraeus

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Polymer Thick Film

Product Name: UVD5271

Solder Mask/ Covercoat

Description

UVD5271 is an UV curable solder mask, covercoat, or dielectric designed for rigid substrates. UVD5271 offers rapid curing combined with outstanding adhesion and resistance to solvents, moisture, and the soldering process. It is less sensitive to surface cleanliness than other UV curable materials. It offers excellent electrical and environmental integrity after soldering and cleaning, and outstanding fine line definition, typically ≥ 8 mils. Heraeus also offers a series of compatible, thermally cured conductors.

Key Benefits

- High adhesion to many substrates
- Excellent chemical and solder resistance
- High insulation resistance and breakdown voltage

Typical Properties

Form:
Dark Blue pseudoplastic paste intended for screen printing.

Viscosity:
10 – 30 Kcps; Brookfield HBT
Spindle #14 @ 50 rpm, 25 °C

Chemical Resistance:
Excellent solvent resistance. Can be immersed for more than 15 minutes in halogenated hydrocarbons, acetone, and lower alcohols without degradation. Resistant to most dilute acids.

Thermal Stability/Solder Resistance:
Withstands molten solder (250 °C) up to 30 minutes to assure 100 % adhesion during normal soldering operations. Withstands a boiling water immersion for seven consecutive hours without degradation.

Recommended Processing Guidelines

Printing:
250 – 280 mesh screen
0.5 mil emulsion
0.02 inch snap-off.
Clean uncured resin with Isopropanol or similar solvent.

Curing:
200 W/in Hg lamp, cure time <1 second and belt speed 8"/minute at 25 micron film thickness. Cures to a glossy hard film which is highly resistant to surface scratching.

Thinner:
RV-825

Warranty:
Material guaranteed to meet specifications for 6 months from date of shipment

Storage:
Store in a dry location at 5 – 25 °C
DO NOT REFRIGERATE.
Allow paste to come to room temperature prior to opening. Spatulate well before using, as settling may occur during storage.

SPECIAL NOTE:
Some of these materials may show resistance shifts due to thermal storage. Stability baking has been shown to minimize this behavior.

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Typical Dielectric Characteristics [3]

Insulation Resistance:
1 x 10^{13} Ω

Dielectric Breakdown Voltage:
> 1000 Volts/mil

Hermeticity I.R.: [4]
1 X 10^{12} ohms

Leakage Current: [5]
30 picoamps

Legend:

1) Properties for single print of 25 microns.

2) I.R. measured with water drop present.

3) Keithley electrometer, 1M
NaCl solution, 4 hour immersion.
Heraeus 5260 epoxy conductor

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